

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Richard J. Mehus; Charles A. Hodge; Quang Van Dao	Confirmation No.	9839
Serial No.:	10/602,384		
Filed:	June 24, 2003	Customer No.:	28863
Examiner:	Samuel P. Siefke		
Group Art Unit:	1797		
Docket No.:	1092-015US01/1653US01		
Title:	CONCENTRATION MONITOR		

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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Applicant respectfully requests a Pre-Appeal Brief Request for Review in the above-referenced application. It is Applicant's position that the Examiner has failed to establish a prima facie case of obviousness of claims 1-7, 18-22 and 24 under 35 U.S.C. 103(a). Applicant addresses this issue in detail below. Applicant does not assert that these are the only errors that the Examiner has made, nor does Applicant waive any arguments that may be asserted in an Appeal Brief.

**Claim Rejection Under 35 U.S.C. § 103**

In the Office Action, the Examiner rejected claims 1-7, 18-22 and 24 under 35 U.S.C. 103(a) as being unpatentable over Nomura et al. (U.S. 6,706,533). Applicant respectfully traverses the rejection.

To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Applicant respectfully submits that the Office Action has failed to meet at least this basic criteria; namely, that Nomura does not teach or suggest all of the limitations recited in Applicant's claims as required to establish a prima facie case of obviousness under 35 U.S.C. §103.

Claim 1 recites, among other things, a memory that stores a plurality of predetermined algorithms, each associated with a different one of a plurality of product classifications, and a controller that calculates a concentration of a product in the selected use solution based on the resistivity, the temperature and a predetermined algorithm associated with a product classification of the product in the selected use solution.

Nomura concerns the estimation of the concentration of an agent (i.e., a particular chemical) in a solution through use of an equation. The equation of Nomura includes constants that are obtained by measuring the electrical conductivity of solutions having known concentrations of a chemical agent at a plurality of temperatures and applying the least squares method to the result (see, e.g., Nomura at col. 4, lines 11-18; col. 9 line 65 to col. 11, line 30). Each agent has its own associated set of constants (see, e.g., Nomura at col. 8, lines 65-67). In other words, Nomura merely describes determining a set of constants for each agent to be measured. Importantly, Nomura does not teach or suggest that the agents are further grouped into product classifications. As a result, Nomura cannot and does not teach or suggest that each of a plurality of predetermined algorithms is associated with a different one of a plurality of product classifications, as recited in independent claim 1. In addition, Nomura further cannot and does not teach or suggest a controller that determines the concentration of an agent based on one of the plurality of the predetermined algorithms associated with a product classification, as is also recited in claim 1.

The Final Office Action, however, does not address the fact that Nomura contains absolutely no teaching or suggestion concerning product classifications, much less teaching or

suggesting a memory that stores a plurality of predetermined algorithms, each associated with a different one of a plurality of product classifications, and a controller that calculates a concentration of a product in the selected use solution based on the resistivity, the temperature and a predetermined algorithm associated with a product classification of the product in the selected use solution, as recited in Applicant's independent claim 1.

Rather, the Final Office Action merely asserts that it would be "predictable" to "store a plurality of different programs associated with different product agents."<sup>1</sup> Then, without ever making any kind of connection between agents and product classifications, or articulating any rational reason for doing so, the Final Office Action makes the conclusory statement that "it would have been obvious to incorporate a memory feature storing a plurality of different predetermined algorithms associated with different product agents or classifications in order to effectively use the disclosed monitoring apparatus in monitoring different product agents."<sup>2</sup>

Applicant respectfully disagrees with the conclusion of obviousness set forth in the Final Office Action. As stated in MPEP § 2141, the key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.* (*KSR*)<sup>3</sup> noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court, quoting *In re Kahn*,<sup>4</sup> stated that "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."<sup>5</sup>

In the present case, the Examiner has not provided a reference or teaching, or any other rational reason why one of ordinary skill in the art would have included a memory that stores a plurality of predetermined algorithms, each associated with a different one of a plurality of product classifications, and a controller that calculates a concentration of a product in the selected use solution based on the resistivity, the temperature and a predetermined algorithm

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<sup>1</sup> Final Office Action at page 4.

<sup>2</sup> *Id.*

<sup>3</sup> *KSR International Co. v. Teleflex Inc.* (*KSR*), 550 U.S. 398, 82 USPQ2d 1385 (2007).

<sup>4</sup> *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).

<sup>5</sup> *KSR*, 82 USPQ2d at 1396.

associated with a product classification of the product in the selected use solution, as recited in claim 1.

The distinction between individual chemical “agents”, such as those described by Nomura, and Applicant’s claimed “product classifications” is described in Applicant’s specification as follows:<sup>6</sup>

Each product or class of products, a product class, has different formulary chemistry and may have different conductivity curve, especially when measured from very low to very high product concentrations. Using detergent as an example, more caustic products, or product classes, tend to have higher conductivity relative to less caustic detergents.

Applicant’s specification goes on to state:<sup>7</sup>

[A] user of concentration monitor 18 could select an algorithm, or lookup table, from memory 30 from eight settings based on product classification. The desired equation or lookup table would be used to determine the concentration of use solution 20 and, hence, control the addition of concentrate to use solution 20.

As an example for use solutions based on detergents, one controller algorithm could be used for a class of extruded products having naturally relatively low conductivity. Another setting could be used for very high concentrations of highly conductive liquid or solid caustic for applications found, for example, in food and beverage and vehicle care use situations.

Thus, Applicant’s claims make an additional distinction that is not taught or suggested in Nomura, i.e., a distinction between the product or “agent” in the selected use solution and the product classification of the product. Namely, as recited in claim 1, the product (or “agent”) has a particular product classification, which in turn is associated with one of the plurality of predetermined algorithms. In other words, rather than calculating the concentration based on a predetermined algorithm associated with each product (or “agent”), claim 1 recites that the controller calculates a concentration of a product in the selected use solution based one of the plurality of predetermined algorithms associated with a product classification of the product in the selected use solution.

Again, nowhere does Nomura teach or suggest that agents may have product classifications, or that the agent concentration may be determined based on based one of a plurality of predetermined algorithms associated with a product classification of the product (“agent”) as recited in claim 1. At most, Nomura merely describes determining a set of constants for each agent to be measured. However, this teaching in no way suggests that agents may

<sup>6</sup> Applicant’s specification at page 6, paragraph [0031].

<sup>7</sup> Applicant’s specification at page 10, paragraphs [0048] and [0049].

further have a product classification, and that each product classification in turn is associated with one of a plurality of predetermined algorithms used to determine the product concentration.

Claims 2-7, 18-22 and 24 are dependent upon claim 1 and include all of the limitations thereof. Claims 2-7, 18-22 and 24 are therefore patentable for at least the same reasons discussed above with respect to independent claim 1. Applicant reserves comment with respect to the dependent claims at this time. Applicant reserves the right to comment on the dependent claims in future Responses or in an Appeal Brief.

For at least these reasons, the Examiner has failed to establish a prima facie case of non-patentability of Applicant's claims 1-7, 18-22 and 24 under 35 U.S.C. §103(a). Withdrawal of this rejection is therefore respectfully requested.

By setting forth the clear grounds of error, Applicant does not assert that these are the only errors that the Examiner has made, nor does Applicant waive any arguments that may be asserted in an Appeal Brief. Applicant requests a review and a panel decision that promptly resolves the issues in Applicant's favor and eliminates the need for an Appeal Brief. Please charge any additional fees or credit any overpayment to deposit account number 50-1778.

Date: December 19, 2008

By:

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